



CITY OF LODI

COUNCIL COMMUNICATION

AGENDA TITLE: Adopt Resolution Authorizing City Manager to Execute Additional Professional Services Task Orders for White Slough Water Pollution Control Facility Discharge Permit Compliance Activities and Appropriate \$1,261,000

MEETING DATE: November 6, 2002

PREPARED BY: Public Works Director

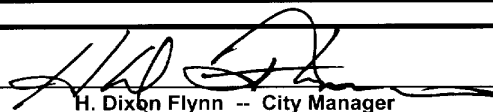
RECOMMENDED ACTION: That the City Council adopt a resolution authorizing the City Manager to execute additional professional services task orders for White Slough Water Pollution Control Facility discharge permit compliance activities and appropriate \$1,261,000.

BACKGROUND INFORMATION: The City's current wastewater discharge permit, issued by the State Regional Water Quality Control Board in February 2000, includes a requirement for the installation of filters (tertiary treatment) by May 1, 2004. Since the issuance of the permit, City staff and our consultants have investigated several alternatives for meeting discharge requirements, including ones that would not include filters. However, after several meetings with Regional Board staff and other changes in regulations that will affect our next permit, it is clear that not only will filters be needed, but also other measures will need to be implemented. The City Council was briefed on these issues at the August 27, 2002 Shirtsleeve Session. An abbreviated version of the presentation is attached as Exhibit A. In order to meet our permit obligations, staff proposes to implement improvements to the Facility in two major phases (although there will be minor subphases). They are:

- 1) Predesign and environmental work for the entire project, interim aeration improvements and filter installation – work in 2002, 2003, and 2004.
- 2) Final design and secondary plant improvements, land acquisition, treatment wetland construction, and discharge relocation – work in 2004 and 2005.

The Phase 1 construction work will necessitate significant funding in 2003, on the order of \$15 to \$17 million. Part of the work will be identifying financing methods, although timing issues may preclude use of a State revolving fund loan for the entire project. However, other financing pools will likely offer favorable rates. The work included in the requested appropriation is the following:

- A) Predesign, financial, and environmental services with West Yost & Associates – this work includes:
- analysis of membrane bioreactors as an alternative to secondary facilities upgrades recommended in the adopted Master Plan
 - analysis of alternate wetland sites (Figure 1) and preliminary design of the wetland by their subconsultant, Brown & Caldwell
 - preliminary Bishop Cut outfall, filter and disinfection designs
 - financial analysis of funding alternates and rate/fee adjustments by subconsultant Hilton, Farnkoph, Hobson
 - miscellaneous mapping, aerial photography, filter and disinfection, and project management
 - total cost \$454,000
- B) Design of Interim Aeration Improvements – This work, also by West Yost, includes final design and preparation of plans and specifications for blower and air diffuser replacement to improve



H. Dixon Flynn -- City Manager

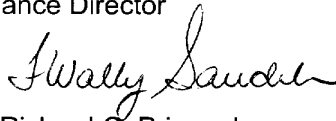
effluent quality until other improvements can be completed. The interim improvements will be totally compatible with the planned secondary treatment improvements and would need to be done anyway. The cost for this task is \$140,000.

- C) Design of Tertiary Filtration Improvements – West Yost & Associates' work on this phase of the project includes final design and preparation of plans and specifications for site preparation, pumping facilities, chemical handling, and tertiary filters. The construction would be divided into two contracts with the first phase, earthwork and site preparation, starting spring 2003 and ending fall 2003. Second phase of construction would immediately follow with completion summer/fall 2004. This design work is expected to cost \$555,000.
- D) Groundwater Monitoring Report – This work, by Saracino-Kirby-Snow, will compile and analyze our groundwater monitoring data at the Facility. This work is a permit requirement. The task will be done in two phases; the first will be an initial study to evaluate recent monitoring and derive preliminary conclusions and recommendations to be sure we have adequate monitoring in place. The second phase will be a final report which will take place after additional monitoring work is completed. The requested appropriation for this effort is \$35,000
- E) Bishop Cut Flow Meter Installation – This work includes the installation of a flow meter in Bishop Cut where the City is planning to install a new outfall. This flow data is necessary to design the outfall and storage facilities to meet State requirements. The Council previously authorized staff to contract with the State Department of Water Resources (DWR) to install this meter; however, we have been informed by DWR that due to budget cuts and staff shortages, they may not be able to do this work. If that is the case, staff proposes to work with our existing consultant team to do this work. This work is anticipated to cost \$60,000.
- F) Regulatory Assistance – This work, also by West Yost, consists of permit negotiations with the Regional Board, much of which has already taken place. Staff will need significant additional assistance in dealing with the Regional Board on the Bishop Cut outfall issue. The cost of these efforts is estimated to be \$70,000.
- G) Miscellaneous Work and Contingencies – These items include bidding assistance, other technical assistance as needed, laboratory analytical costs, appraisals and other outside direct expenses. Plus, we request a contingency amount of roughly 3% of the above items for a total amount of \$37,000.

FUNDING: The above items total \$1,351,000. We have \$90,000 in unused prior appropriations which can be applied to this amount thereby reducing the total new appropriation to \$1,261,000. This work was included in the fiscal year 2002/03 Wastewater CIP Budget, Page 37, with a total estimate of \$2.5 million.

Funding Available:


Vicky McAthie, Finance Director


for Richard C. Prima, Jr.
Public Works Director

RCP/lm

Attachment

cc: Randy Hays, City Attorney
Fran Forkas, Water/Wastewater Superintendent
Del Kerlin, Assistant Wastewater Treatment Superintendent
Bruce West, West Yost & Associates
Glenn McPherson, Saracino-Kirby-Snow

Chronology of Work

January 1999 - WYA retained for planning and regulatory coordination

August 1999 to October 2000 – Draft findings/ presentations to public advisory committee(6) and City Council (3)

January 2001 - Final Wastewater Master Plan

January 2001 - Began alternative outfall investigation/ discussions with RWQCB

January 2001 - Initiated percolation study of potential disposal sites

September 2001 - Began pre-design of improvements to existing treatment process

March 2002 - Completed feasibility study of membrane bioreactor treatment process

Chronology of Regulatory Actions

- February 2000: Existing permit adopted
- May 2000: State Implementation Plan (SIP) adopted
- Several Permits Adopted in 2000 and 2001 Enforcing SIP Policy
- April 2001: New groundwater recharge requirements proposed by DHS
- May 2002: RWQCB adopts the tentative permit for Stockton, which does not allow dilution credits for some criteria

State Implementation Plan (May 2000)

- ▶ Establishes a Statewide Standard Approach for Permitting Discharges of Toxic Pollutants (CTR Criteria)
- ▶ Greatly Expands the Data Requirements for NPDES Permit Development
- ▶ Triggers Unprecedented Treatment Plant Effluent Standards
- ▶ Establishes a Schedule for Achieving Compliance with New Standards (up to 5 years)

Master Plan Report Sections

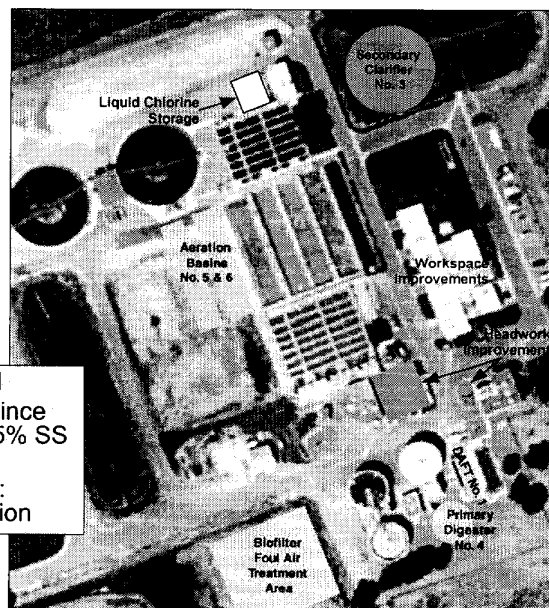
- ▶ Executive Summary
- ▶ Introduction
- ▶ Flow & Loading Projections
- ▶ Anticipated Discharge Requirements & Issues
- ▶ Compliance with Anticipated Discharge Requirements
- ▶ Evaluation Criteria
- ▶ Wetlands Treatment
- ▶ Industrial Wastewater Treatment & Disposal/Reuse
- ▶ Biosolids Disposal/Reuse Alternatives
- ▶ Alternatives for Effluent Land Treatment, Reuse & Storage
- ▶ Treatment Plant Upgrade & Expansion Alternatives
- ▶ Odor Control
- ▶ Combined Treatment & Disposal/Reuse Alternatives
- ▶ Recommended Wastewater Program

Master Plan Conclusions

- Recommendations for Secondary Improvements Common to All Disposal Options
- Three Potential Disposal/Advanced Treatment Options
- Outlined Future Work

Master Plan Recommended Primary/ Secondary WPCP Improvements to 8.5 mgd (2020)

- Project Cost: \$16 M
- Recent Changes: Since 2000, 20% BOD, 35% SS loading increase
- Regulatory Change: Related to chlorination



City of Lodi WPCF: Discharge Issues

- Discharge Is to a Dead-End Slough with No Dilution
- Drinking Water Beneficial Use Dictates Stringent Effluent Limits for Priority Pollutants
- Agricultural Beneficial Use Dictates Title 22 Tertiary Treatment
- Effluent Limits Cannot Be Reliably Met Even with Improved Treatment Facilities

Regulatory Negotiations

- Surface Discharge Application to RWQCB (March 2001)
- Informal Response: Filters required
- Continued Negotiations: Dilution in Bishop Cut

Measures Proposed to Respond Discharge Issues

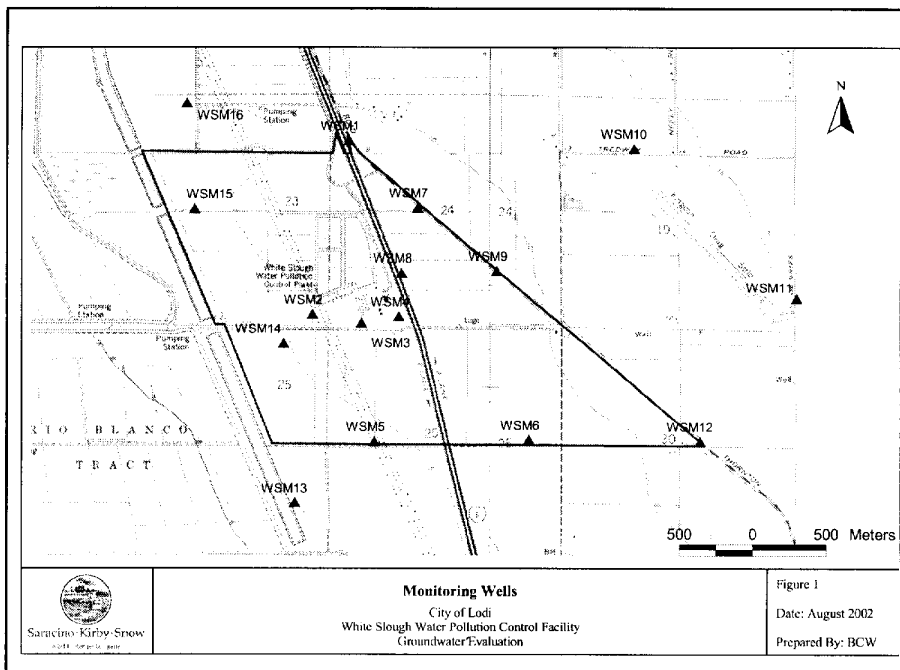
- Expand Secondary Treatment Process
- Provide Title 22 Filtration/Disinfection
- Move Outfall to Location with More Dilution
- Maximize Summer Reuse/Storage
- Treatment in Outfall Wetlands

Ongoing Regulatory Negotiations: Dilution Issues

- Dilution Credits Are Critical
- Model Data Is Not Confirmed
- RWQCB Requires Flow Monitoring & Tracer Study Data
- City Installing Flow Meter in Bishop Cut
- Additional Flow/Tracer Data Needed after the Outfall Is in Place

SKS Groundwater Monitoring Activities

- October 2000: City submitted Groundwater Monitoring Report to RWQCB
- November 2000: RWQCB requested a workplan
- January 2001: City submitted a workplan to RWQCB
- January 2001: RWQCB approved the workplan





SKS Groundwater Monitoring Activities

- April 2001: construction of 9 new monitoring wells completed
- July 2001: digital data loggers installed in all 16 (7 existing and 9 new) monitoring wells
- November 2001: Refined water quality sampling protocol implemented



SKS Groundwater Monitoring Activities

- Ongoing Activities
 - Water level data collected digitally 24 hours per day
 - Water quality sampling conducted quarterly by City personnel
- Upcoming Activities
 - Data analysis to begin Fall/Winter 2002
 - Report preparation to begin Fall 2003

Long Term Project

- Negotiate Purchase of Wetlands Site
- Prepare Environmental Impact Report
- Complete Pre-Design of Facilities
- Ongoing Flow/Dilution Analyses
- Prepare Draft Revenue Program for SRF Loan Funding Process
- Submit RWQCB Permit Application
- Design of Facilities
- Construction of Facilities

Interim Project

- Design & Construction of Interim Blower Improvements
- Design & Construction of Interim Diffuser Improvements
- Installation of Secondary Clarifier Polymer Feed Equipment

Estimated Cost of Improvements

- ▶ Interim Project: \$1.3 to \$1.8 million
- ▶ Long Term Project: \$35 to \$45 million*

*** To be confirmed in Pre-Design**

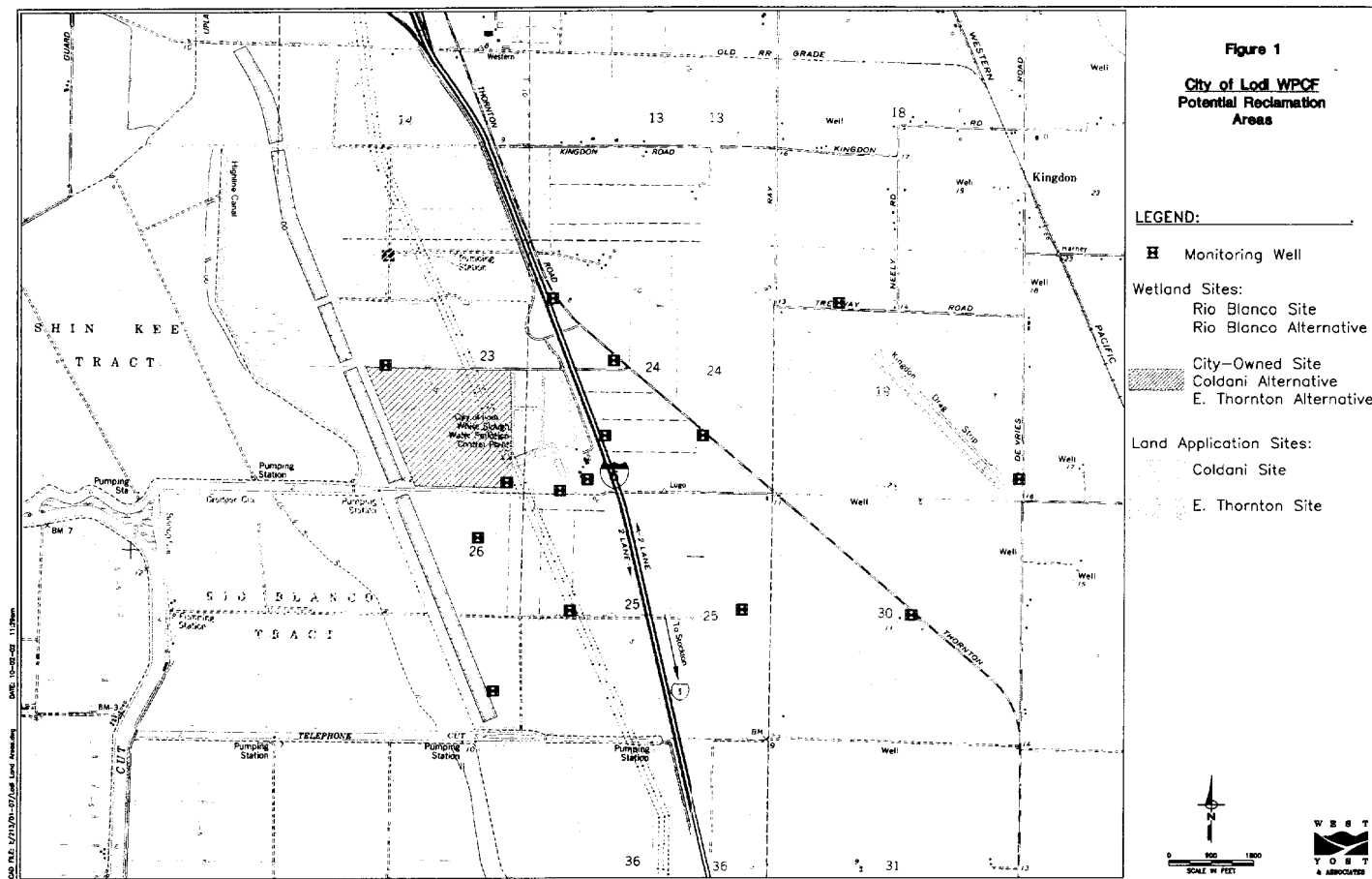


Figure 1

City of Lodi WPCF
Potential Reclamation Areas

LEGEND:

Monitoring Well

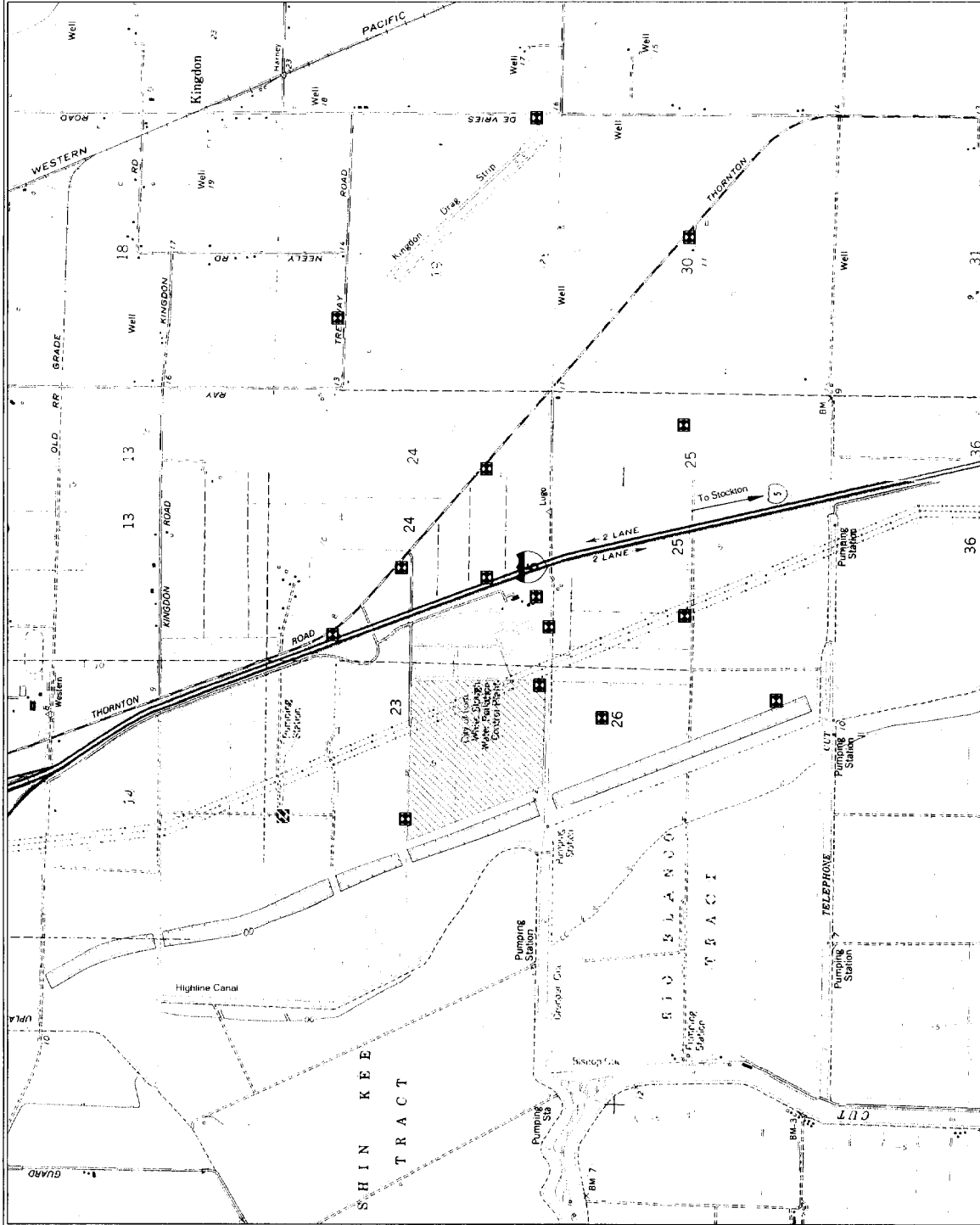
Wetland Sites:

Rio Blanco Site
Rio Blanco Alternative

City-Owned Site
Coldani Alternative
E. Thornton Alternative

Land Application Sites:

Coldani Site
E. Thornton Site



SCALE IN FEET
0 500 1000

RESOLUTION NO. 2002-223

A RESOLUTION OF THE LODI CITY COUNCIL AUTHORIZING THE
CITY MANAGER TO EXECUTE ADDITIONAL PROFESSIONAL
SERVICES TASK ORDERS FOR WHITE SLOUGH WATER
POLLUTION CONTROL FACILITY DISCHARGE PERMIT
COMPLIANCE ACTIVITIES, AND FURTHER APPROPRIATE
FUNDS FOR THIS PROJECT

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WHEREAS, the City's current wastewater discharge permit, issued by the State Regional Water Quality Control Board in February 2000, includes a requirement for the installation of filters (tertiary treatment) by May 1, 2004; and

WHEREAS, since the issuance of the permit, City staff and our consultants have investigated several alternatives for meeting discharge requirements, including some that would not include filters; and

WHEREAS, following several meetings with the Regional Board staff and other changes in regulations that will affect our next permit, it is clear that not only will filters be needed, but also other measures will need to be implemented; and

WHEREAS, in order to meet our permit obligations, staff proposes to implement improvements to the Facility in two major phases (that will also include minor subphases). They are as follows:

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NOW, THEREFORE, BE IT RESOLVED, that the Lodi City Council does hereby authorize the City Manager to execute additional professional services task orders for White Slough Water Pollution Control Facility Discharge Permit Compliance Activities; and

BE IT FURTHER RESOLVED, that funds in the amount of 1,261,000.00 be appropriated as follows:

The above items total \$1,351,000. We have \$90,000 in unused prior appropriations which can be applied to this amount thereby reducing the total new appropriation to \$1,261,000. This work was included in the fiscal year 2002/03 Wastewater CIP Budget, Page 37, with a total estimate of \$2.5 million.

Dated: November 6, 2002

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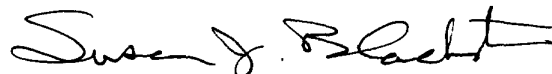
I hereby certify that Resolution No. 2002-223 was passed and adopted by the Lodi City Council in a regular meeting held November 6, 2002 by the following vote:

AYES: COUNCIL MEMBERS – Hitchcock, Howard, Land, Nakanishi, and Mayor Pennino

NOES: COUNCIL MEMBERS – None

ABSENT: COUNCIL MEMBERS – None

ABSTAIN: COUNCIL MEMBERS – None



SUSAN J. BLACKSTON
City Clerk

CITY COUNCIL

PHILLIP A. PENNINO, Mayor
SUSAN HITCHCOCK
Mayor Pro Tempore
EMILY HOWARD
KEITH LAND
ALAN S. NAKANISHI

CITY OF LODI

PUBLIC WORKS DEPARTMENT

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P.O. BOX 3006
LODI, CALIFORNIA 95241-1910
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FAX (209) 333-6710
EMAIL pwdept@lodi.gov
<http://www.lodi.gov>

H. DIXON FLYNN
City Manager
SUSAN J. BLACKSTON
City Clerk
RANDALL A. HAYS
City Attorney
RICHARD C. PRIMA, JR.
Public Works Director

October 31, 2002

Mr. Bruce West
West Yost & Associates
1260 Lake Blvd., Ste. 240
Davis, CA 95616

Mr. Glenn McPherson
Saracino-Kirby-Snow
980 Ninth Street, Ste. 1480
Sacramento, CA 95814

SUBJECT: Adopt Resolution Authorizing City Manager to Execute Additional Professional Services Task Orders for White Slough Water Pollution Control Facility Discharge Permit Compliance Activities and Appropriate \$1,261,000

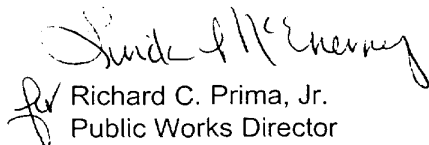
Enclosed is a copy of background information on an item on the City Council agenda of Wednesday, November 6, 2002. The meeting will be held at 7 p.m. in the City Council Chamber, Carnegie Forum, 305 West Pine Street.

This item is on the regular calendar for Council discussion. You are welcome to attend.

If you wish to write to the City Council, please address your letter to City Council, City of Lodi, P. O. Box 3006, Lodi, California, 95241-1910. Be sure to allow time for the mail. Or, you may hand-deliver the letter to City Hall, 221 West Pine Street.

If you wish to address the Council at the Council Meeting, be sure to fill out a speaker's card (available at the Carnegie Forum immediately prior to the start of the meeting) and give it to the City Clerk. If you have any questions about communicating with the Council, please contact Susan Blackston, City Clerk, at (209) 333-6702.

If you have any questions about the item itself, please call Wally Sandelin, City Engineer, at (209) 333-6709.


for Richard C. Prima, Jr.
Public Works Director

RCP/pmf

Enclosure

cc: City Clerk

NCADDLTASKORDERS